AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of encoding video content, the method comprising:

assigning a predefined quantization model to each of at least two regions of interest ~~video content portions~~ of [[the]] video content, wherein a respective region of interest ~~each~~ of the at least two regions of interest ~~video content portions~~ comprises a ~~temporal, multiframe segment of the video content~~ rectangular-based region covering less than a full frame identified on a frame-by-frame basis by a first descriptor associated with top left corner coordinates of a first sub-segment in the respective region of interest and a second descriptor associated with a last sub-segment in the region of interest, wherein the first descriptor and the last descriptor define a defined structure of the respective region of interest based on a number of sub-segments in the respective region of interest, wherein the respective region of interest includes an arbitrarily shaped object in a portion of the respective region of interest that is smaller than the defined structure of the respective region of interest; and

~~routing~~ encoding at an encoder of a plurality of encoders each of the at least two regions of interest ~~video content portions to one of a plurality of encoders~~ based on ~~a respective one of~~ the predefined ~~models~~ quantization model assigned to the defined structure of the respective ~~to each of the at least two~~ region of interest ~~video content portions~~, ~~wherein~~ the encoder using quantization model information to encode each of the at least two regions of interest differently based on the assigned predefined quantization model.

~~the assigning a predefined model to each of the at least two video content portions further comprises:~~

~~comparing descriptors associated with each of the at least two video content portions with corresponding stored model descriptors from a plurality of predefined content models, and~~

~~assigning each of the at least two video content portions to a respective best content model from the plurality of predefined content models based on the comparing of the descriptors.~~

2 - 29. (Cancelled)

30. (currently amended) The method of claim 1, wherein the assigning a predefined quantization model to each of at least two regions of interest ~~video content portions~~ of the video content further comprises assigning a different predefined quantization model to each of the at least two regions of interest ~~video content portions~~ of the video content.

31-35. (Cancelled).

36. (New) The method of claim 1, wherein the region of interest information is found in a header.

37. (New) The method of claim 1, wherein the region of interest information indicates a boundary of the region of interest.

38. (New) The method of claim 1, further comprising assigning another predefined quantization content model to a portion of the full frame not covered by the at least two regions of interest.

39. (New) The method of claim 1, further comprising encoding in a header data regarding the which predefined quantization content model a decoder should use to decode each respective region of interest.

40. (New) A method of encoding video content, the method comprising:

assigning a predefined content model to a region of interest in video content, wherein the region of interest comprises a rectangular-based region covering less than a full frame identified on a frame-by-frame basis by a first descriptor associated with top left corner coordinates of a first sub-segment in the respective region of interest and a second descriptor associated with a last sub-segment in the region of interest; and

encoding at an encoder of a plurality of encoders the region of interest differently from a portion of the full frame not covered by the region of interest based on the assigned predefined content model, each encoder of the plurality of encoders having an associated predefined content model that is different from other encoders of the plurality of encoders, the encoder adding header information to instruct a decoder of a plurality of decoders how to decode the region of interest based on the assigned predefined content model.

41. (New) The method of claim 40, wherein the predefined content model is associated with adaptive quantization.

42. (New) A method of decoding video content, the method causing a decoder to perform steps comprising:

receiving header information associated with an assigned predefined content model for a region of interest in video content, wherein the region of interest comprises a rectangular-based region covering less than a full frame identified on a frame-by-frame basis by a first descriptor associated with top left corner coordinates of a first sub-segment in the respective region of interest and a second descriptor associated with a last sub-segment in the region of interest; and

based on the header information and the assigned predefined content model, decoding the region of interest at a decoder of a plurality of decoders, the decoder decoding the region of interest differently from a portion of the full frame not covered by the region of interest and wherein each decoder of the plurality of decoders has an associated predefined content model that is different from other decoders of the plurality of decoders.

43. (New) The method of claim 42, wherein the assigned predefined model causes the decoder to adaptively dequantize the region of interest.